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REPORT ON THE OPERATIONS

OF THE

DEPT. OF AGRICULTURE AND COMMERCE,

NORTH-WESTERN PROVINCES AND OUDH;

FOR THE YEAR ENDING 30TH SEPTEMBER, 1886.

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OF THE

DEP. OF AGRICULTURE AND COMMERCE, NORTH-WESTERN PROVINCES AND OUDH,

FOR THE YEAR ENDING 30TH SEPTEMBER, 1886.

No. 6955G. OF 1886.

FROM

DONALD SMEATON, ESQ., M.A., C.S.,

DIRECTOR, DEPARTMENT OF AGRICULTURE AND COMMERCE,

N.-W. PROVINCES AND OUDH,

TO

THE CHIEF SECRETARY TO GOVERNMENT,

N.-W. PROVINCES AND OUDH.

Dated Cawnpore, the 23rd November, 1886.

SIR,

I have the honor to submit for the consideration and orders of His Honor, the Lieutenant-Governor and Chief Commissioner, the report on the operations of this Department for the year ending 30th September, 1886. I have adhered to the names and order of the subjects adopted in previous reports.

SECTION I.

MAINTENANCE OF VILLAGE RECORDS.

1. **Patwari and Kanungo Code now in universal practice over the United Provinces.**—During the year 1885-86 the revised rules (of 1883) for patwáris and kanúngos have been in force in all the temporarily-settled districts except Kumaun and Garhwál, and they have been introduced in a more or less complete form also in the permanently-settled districts: so that at the present time the entire patwári and kanúngo staff of the United Provinces (except the two hill districts named) are working under the Code.

There are in the North-West Provinces—

21,482	patwáris.	
468	supervisor	kanúngos.
172	registrar	ditto.
34	sadr	ditto.
162	assistant	ditto.

In Oudh there are—

2,396	patwáris.	
186	supervisor	kanúngos.
43	registrar	ditto.
12	sadr	ditto.
55	assistant	ditto.

North-West Provinces (37 *districts*).

2. **Board's criticisms on the work of 1883-84.**—In the month of November, 1885, the Board of Revenue drew attention to certain defects in the working of the

patwári and kanúngo staff during 1883-84 (the year preceding my taking charge of the Department), chief of which were :—

(*a*) Inaccuracy in compilation of pargana statistics in certain districts.

(*b*) Falling off in the amount of testing done by supervisor kanúngos.

(*c*) Increase in the number of non-resident patwáris.

(*d*) Inadequate supervision by sadr kanúngos.

I addressed the Commissioners of Divisions, pointing out the necessity of speedily remedying these defects, indicating the proper remedy and the way to apply it. It is believed that good has resulted.

3. **References and rulings.**—Certain points were raised by District Officers in connexion with the rules and referred for ruling or explanation. With the sanction of the Board of Revenue Circular Orders were issued on these points. The more important of these rulings and explanations were as follows :—

(i) That all rent receipts, both in money and in grain, shall be entered in column 5 of the patwáris' siáha.

(ii) That column 15 of the grain bahi-kháta shall show the money value of the total grain rent as well as the quantity of grain.

(iii) That patwáris shall report in writing to the registrar kanúngo and enter in their diaries all private partitions of land.

(iv) That registrar kanúngos shall, if directed by the Collector, be bound to keep up diaries.

4. **Additions to the kanungo staff.**—During the year the following additions to the kanúngo establishment were made:—

Assistant registrars	...	...	...	11
Clerks for sadr kanúngos	...	...	...	2
Peon for sadr kanúngo	...	...	...	1

These appointments were made in the districts of Saháranpur, Muzaffarnagar, Jaunpur, Benares, Gházipur, and Tarái and were necessary for the carrying on of work and in strict accordance with the scale of establishment laid down in the rules.

5. **New arrangement for supply of patwari forms. Saving effected.**—In the report for last year (1884-85) it was stated that arrangements had been made for concentrating the printing of patwári statistical forms in two large private presses under the direct supervision of this Department. It was then anticipated that, besides preventing the waste which had before been so common and ensuring superior work, this arrangement would effect a considerable saving. I am able now to report that these anticipations have been realized. The entire supply of paper for the patwári forms is procured from the (Couper) Lucknow paper manufactory : and the whole of the printing is done by the *Newal Kishore* and the *Church Mission* Presses. The paper and printing have been quite up to the mark and the supplies have been punctual. The saving has been even larger than had been anticipated. The following figures will speak for themselves :—

	Rs.	a.	p.
Total allotment for patwári forms for 1885-86, Rs. 99,178, and for 1886-87 ...	=90,000	0	0
Expenditure, 1885-86	=94,659	9	9
Estimated expenditure under the new arrangement for 1886-87	=59,000	0	0

Thus the saving on the budget grant in 1885-86 was Rs. 4,518-6-3, and the probable saving in 1886-87 will be Rs. 31,000.

The surplus thus left to us has come at a most opportune time. The provincial grant for patwáris and kanúngos was determined upon, with perhaps scarcely due allowance for prospective needs : and if a saving of the kind just described had not been made, I would have been obliged, from sheer necessity, to apply for more money. The saving now effected has provided us with funds just at the right moment. I have pleasure in bringing to His Honor's notice that to the indefatigable efforts of Colonel

Pitcher, Deputy Director, is mainly due the credit of this saving. He has organized the entire work of paper supply, printing, and despatch to districts in a way which leaves nothing to be desired.

6. **Patwari Schools.**—Every district, except Kumaun and Garhwál, has had a patwári school working during the year: and branch schools have been established in Bánda and the Tarái as a temporary measure. Endeavour is now being made to reduce to some extent the school establishments where the necessity for the present scale has disappeared. Assistant teachers in several districts will soon be unnecessary.

The exact condition of the schools and of the education of patwáris will be understood from the following figures: —

	1883-84.	1884-85.	1885-86.
Average attendance of patwáris ...	890	1,189	923
„ Candidates ...	174	315	405
Total cost, Rs. ...	4 351	13,990	15,801
Total receipts, Rs. ...	779	7,273	18,056
Number of patwáris examined since October, 1883 ...	330	3,946	8,104
Number of patwáris passed in all subjects since October, 1883. ...	219	2,193	4,206
Number of patwáris yet to attend school ...	...	14,178	7,161

These figures show satisfactory progress in the training of the patwáris, so far as schools can train them. It has been found, however, that in a number of districts the attendance of candidates is very small—so small in fact as to make it difficult for the Collectors to get passed men to fill vacancies. This matter has been under enquiry lately. Two causes which, in my opinion, operate against the schools are—(1) the high fee of Re. 1 per mensem which is levied; (2) the poor prospects offered for patwáris in several districts. The latter of these causes can only gradually be removed. The former, however, deserves attention. I am of opinion that a fee of 8 annas per mensem, or even 4 annas per mensem, if possible, would be fairer and less likely to discourage candidates than the present charge of Re. 1 per mensem, which to men of the candidate class must often prove a heavy tax.

It is of the utmost consequence that the men who have to keep up the records prescribed in the Code of rules should be as highly qualified as possible. The importance of the statistics which they annually prepare is year by year increasing. Fairness, rapidity, and economy in the settlement revisions which are coming on in the province will very much depend on the way in which these annual records are prepared. Viewed in this light, every improvement in the training of the men, every improvement in the accuracy of the records, is a direct and substantial gain to the province and to the administration. The school teaching accomplishes a little—but *very* little. What is needed is the practical training of a survey or a settlement in the field.

7. **Re-arrangement of patwari circles.**—The following arrangements in respect of patwári and kanúngo circles have been made during the year:—

Gorakhpur.—The re-distribution of circles which was provisionally sanctioned last year has now been confirmed.

Jaunpur.—The scheme of re-distribution of patwári circles has been submitted through this office to the Board. Sanction has not yet been received.

Gházipur.—Several important and difficult questions were raised in connection with the re-distribution and organization of the patwári establishment in this district. These points arose out of the complicated tenure on which, in certain parganas, land is held and the anomalous modes of rent collection and revenue payment current in the district. It was found necessary to modify the application of certain of the rules and to propose certain changes in the distribution of patwáris' work. The Board have now given their sanction to the arrangements, which will be at once carried into effect.

Ballia.—The re-arrangement of circles has been now sanctioned by the Board and Government for the whole district.

Benares.—The entire patwári and kanúngo arrangements have been completed and sanctioned by Government.

Dehra Dún.—The Board have requested re-consideration of the revised patwári and kanúngo arrangements with a view to certain further economies. The Superintendent will shortly report amended proposals.

8. Certain minor alterations of patwári circles have been made in several districts, but they are not of sufficient importance to require notice.

9. **Reproduction of village maps for the use of patwaris.**—Funds were supplied to District Officers to meet the cost of muslin frames on which the patwáris have now been required to trace corrected copies of their village maps for themselves. In most districts this practice of self-supply has been introduced and is working, and in the course of a year or two the practice will, it is hoped, become universal. Neat map-drawing and map-tracing are taught in every patwári school.

10. **Accommodation for village records.**—There is a general demand all over the provinces for increased accommodation for the annual records, and that there should be such a demand is obvious. We require a set of records to be prepared, and a set of abstracts from them, and a third set of summaries from these abstracts: and we insist on keeping the bulkiest of the originals, the khasra, for the whole term of the settlement. The crop statistics, the rent statistics, the occupation statistics, the irrigation statistics, are all taken from the khasra, tabulated in various ways after comparison and check and deposited for future reference. To retain the original khasra for more than (say) four years is a waste of space and a waste of money. I have pointed this out more than once, but the sanctity of ancient khasras appears too great to permit of ordinary economy in dealing with them. If the maximum limit be fixed at four-year-old khasras, we shall save in accommodation, labour, and money. If, however, it be resolved not to part with ancient khasras, then we must pay for them in extra accommodation. The entire funds at my disposal under this head during the year were required to meet the cost of additional racks in the Azamgarh and Ballia districts. The Commissioner of Meerut has been requested to arrange for enlarging five tahsíl record-rooms in three districts of his Division from his Public Works' budget reserve, the estimated cost being Rs. 1,325. The total estimated cost of additional accommodation required in the provinces has been recently communicated to the Board. It is Rs. 16,654. Besides this expenditure for construction there will be an outlay on extra *bastas* or cloth-binders, and then, doubtless, it will be found necessary to have an extra assistant to keep the increasing mass of records in decent order. What is wanted is reduction of the mass of records far more than increase of accommodation.

11. **Comparison of transfers registered under the law with transfers recorded by the registrar kanungos.**—The statistics obtained from a number of districts show that a considerable proportion of the transfers of land which are registered under the law are not reported, and therefore not recorded in the mutation registers by the registrar kanúngos. I have proposed to the Board of Revenue, with the concurrence of the Commissioner of Stamps and Registration, that the registration clerk in each tahsíl be required to co-operate with the registrar kanúngo by making over to him every evening the mauzawár schedule of registered deeds for comparison with his mutation register. The kanúngo will each evening be able to see what transfers have taken place with which he is concerned and will take note of these. If after (say) a month none of the parties apply for mutation of names, the kanúngo will call upon them, through the patwári, to come and cause mutation to be made or explain why it should not be made.

I have proposed to the Board that this scheme of co-operation be put experimentally in operation in certain selected districts. A year's experience will show

whether it will answer. Measures will at the same time be taken to ensure more punctual reporting of transfers by the patwáris themselves. The co-operation of the Registration Department will be quite simple and will afford a useful check on the patwáris.

12. **Examination of kanungos.**—Examination of kanúngos and of approved candidates for kanúngoships were held in all the divisions of the provinces during the year under report. The following were the results of examination :—

	Examined.	Passed in all subjects.	Passed in some subjects.	Failed in all subjects.
Sadr kanúngos	...	...	...	...
Registrar kanúngos	5	5	...	...
Supervisor kanúngos	13	3	10	...
Candidates	113	33	76	
Patwári teachers	4	2	2	...
Assistant patwári teachers	4	2	2	...
Assistant registrar kanúngos	23	9	14	...
Assistant sadr kanúgos	3	...	2	
Total ...	165	54	106	5

13. **Audit of patwari salary bills.**—The audit of the patwári salary bills has now been finally transferred to the Accountant-General, and the transfer has been a great relief. The bill clerk who was attached to the patwári section of this Department has been brought under reduction.

14. **Revisions of settlement.**—*Lalitpur.*—During the year the orders of Government were received in regard to the Lalitpur settlement. It has been decided that the current settlement shall continue till 1898, and that in the meantime measures shall be taken to perfect the maps and records.

I have reported to the Board of Revenue the steps which, in the absence of a complete re-survey, are necessary to be taken. But it is doubtful if anything short of a complete re-survey will suffice. A compromise similar to what I have recently proposed for Muzaffarnagar may be feasible, and if it could be managed in the way proposed for Muzaffarnagar, the advantage to the district would be very great. The defect in all our past settlements and the danger in those that are now coming on is that the patwáris of the settled district are left very little, if at all, better than they were before settlement began. They are treated more as hangers-on of the hireling staff than anything else, get no training, have little or no responsibility.

Jhánsi.—I have also submitted a report of the measures which should be adopted in Jhánsi for the same end. The suggestion just made for Lalitpur applies equally to Jhánsi. The patwáris are better, the maps are better, than in Lalitpur. The Muzaffarnagar proposal would thus be more easily worked and a survey *de novo* would be avoided.

Muzaffarnagar.—In February last I reported upon the condition of the Muzaffarnagar maps and records as a basis for the forthcoming revision of settlement and furnished an estimate of the financial prospects of such a revision. In March I submitted certain proposals in regard to the method to be pursued. In October I submitted a further memorandum of proposals for the rapid and complete revision of maps and records preliminary to assessment, including the thorough training of the patwári and kanúngo staff. The memorandum on method of assesment will follow soon.

Saháranpur.—In February last I reported on the maps and records of Saháranpur in exactly the same way and in the same detail as in Muzaffarnagar, and furnished a similar estimate of financial prospects. The maps and khasras of nearly the entire district have now been completely revised and corrected; tracings of the

corrected maps have been given to the patwáris and completely new khasras have been prepared. The whole work has been done by or at the expense of the patwáris themselves and has cost Government nothing The new assessment could be made forthwith upon these maps and records without further revision.

15. **Inspection of districts.**—Of the 35 districts in the provinces in which the patwári and kanúngo rules are in force, 21 have been inspected during the year; of these 14 were inspected by me, 5 by the Deputy Director (Colonel Pitcher), and 2 by the Assistant Director (Mir Muhammad Husain).

The following are summaries of the results of the inspections :—

Bulandshahr.—The patwáris were late in preparing their khasras, owing, in some measure, to the bad season and to there being a good deal of sickness among them. Some carelessness in the transfer statements prepared in tahsíls. Omissions of altered field boundaries in maps not infrequent. Crop entries fairly correct.

Meerut.—Nearly all the patwáris are in possession of maps traced by themselves and as a rule neat. Some delay in filing khasras in the Sardhana tahsíl. The maps and records in all tahsíls except Sardhana creditably kept and accurate. In Sardhana the proportion of errors found in the villages tested was rather high, especially in crop entries. The record-rooms in the district need enlarging and improvement. The tahsíl registers and transfer statements were found well kept up to date and correct. The Collector vigorously insists on the patwáris and kanúngos working.

Muzaffarnagar.—Separately reported upon.

Sahárunpur.—Separately reported upon.

Budaun.—Patwáris are now reproducing their own maps neatly. Maps appeared to be on the whole kept well abreast of all changes in fields. Tahsíl registers up to date and on the whole correctly compiled. Sadr kanúngo and supervisor and registrar kanúngos appear to have worked well.

Moradabad.—The work in Amroha tahsíl inferior and in arrear. The registrar kanúngo, Sant Parshad, was lazy and incompetent and he has been now dismissed. The sadr kanúngo, Narain Das, is not up to the mark and should be transferred. The registers of transfers are not kept with sufficient care and accuracy. The other tahsíl registers (except in Amroha) fairly good. Patwáris have begun to make their own tracings of corrected maps. The record-room in the Moradabad tahsíl was not kept as well as it ought to be.

Bareilly.—Inspected the Aonla tahsíl. Found that the jamabandis had been lodged in fairly good time. The mahálwár and mauzawár registers, however, both of the Aonla and the other tahsíls are in arrear by one whole year, and there is no sufficient reason for this discreditable arrear. Found several errors in both these registers. Patwáris appear to have kept their maps fairly up to date, but they have not yet begun to make clear tracings of the corrected maps for themselves. On the whole, the work in this district does not compare favourably with the work in the adjoining district of Budaun. The sadr kanúngo wants stirring up.

Bijnor.—The work all round in this district is good. The Collector insists on patwáris and kanúngos doing their duty. Numerous corrections on maps necessitated by the constant alterations in field boundaries that take place: the corrections were generally accurately and neatly done. The fresh tracings made by patwáris were on tissue paper; they should be on *latta*-cloth, and they need not be made every year, but only when corrections extend over 25 per cent. of the map. The muáfi registers are remarkably well kept up. Other districts have been directed to adopt the modified method and form current in this district. Mahálwár and mauzawár registers neat, accurate, and up to date.

Agra.—The sadr kanúngo had inspected the work of all the supervisors. Crop returns (jinswar) were in arrear. This would not occur if the supervisors stirred up

the patwáris to complete their khasra (crop) appendices promptly and entered the statistics, village by village, as they came in. At present they wait till all the patwáris have lodged their appendices: hence the delay. The tahsíl registers were fairly correct. The supervisors had made fairly thorough testings of the patwáris' work in their circles.

Farukhabad.—Work in tahsíls Aligarh and Kaimganj not good. The registrars in both tahsíls had been dismissed for incompetency and carelessness, and their successors had had hard work to get the registers into decent order. The field work in these tahsíls also was not up to the mark. One supervisor (Jugul Kishore) had been kept far too long in the pargana office camp, and had consequently been able to do very little field work. District Officers have been requested to prevent this sort of thing. In the other tahsíls both field and office work fairly good. Patwáris are now beginning to make tracings of their corrected maps for themselves.

Jaunpur.—Work under the rules is going on in three tahsíls, of which the new records-of-rights have been framed. Work will begin shortly in the remaining two tahsíls. The new records-of-rights in this district have taken eight years in preparation (since 1878), and even now are found by the settlement officer in the three tahsíls first taken in hand to be seriously inaccurate as regards *sír* and tenant-occupancy entries. The records of these three tahsíls have accordingly had to be called in again for revision. This has interfered with the patwári and kanúngos' work, but the revision was necessary. The field work of the supervisor kanúngos had not been as vigorously carried on as should be. The registers are somewhat in arrears. The sadr kanúngo, Bhagwan Parshad, needs stirring up. All the kanúngos seem inclined to be lazy.

Allahabad.—The work of this district is in all respects good. The Collector keeps his eye on it, and credit is due to Pandit Kidar Nath, the Deputy Collector in charge of patwáris and kanúngos, for the satisfactory state of work which I found. The patwáris are making tracings of their corrected maps for themselves, and the maps are kept well up to date. The supervisor kanúngos make their annual testings carefully. The registers kept by the registrar kanúngos are in good order and as a rule correct.

Cawnpore.—In tahsíl Bilhaur the registers were neither neatly kept nor accurate nor ready in time. The milán-khasras were found to have been prepared without sufficient care and testing of the khasras. In the other tahsíls both the registrars' work and the field work of the supervisors was satisfactory. Considerable fluctuations in *sír* and occupancy entries up to the year 1291 fasli had been found in one tahsíl which necessitated a revision. Compared with past years, work in the district shows improvement, but it still needs great watchfulness.

Fatehpur.—A marked improvement has taken place in the work of the kanúngos since last year, and the sadr kanúngo has been much more energetic. Supervisors' field testings fairly careful and the registers prepared by the registrars (except in one tahsíl) on the whole neat and correct. The patwáris are now being taught to make tracings of their maps for themselves.

Bánda.—An improvement on last year's work apparent. The sadr kanúngo appears up to his duty. The supervisors had completed their tours of inspection satisfactorily and in good time. The milán-khasra showed several errors, particularly in the entries of do-fasli (double-cropped) land. The supervisors do not appear to test the khewats and jamabandis sufficiently, nor do they assist the registrar kanungos at slack times as, under the rules, they ought to do.

Hamírpur.—The work in this district is well in hand. The patwáris are trained to make copies of their corrected maps for themselves. The supervisor kanúngos have been kept up to the collar and have worked well. The registers are in good

order and creditably correct. The supervisor kanúngos do not give the assistance to the registrars which, under the rules, they ought to give. Crop statements correct and kept up well.

Mirzapur.—There are several *tappas* in the district still unsurveyed, and for these there are no records as yet for the patwáris to start upon. Considerable improvement in the kanúngo work compared with last year, but there is still much to be done. The crop statements were late and some of the tahsíl registers were much behindhand. Efforts are being made to bring the work up to the mark. It will need care and attention.

Azamgarh.—This has been a very difficult district to manage. Last year every branch of the work was found bad and the patwáris and kanúngos as a rule careless and inattentive. A clearance has been made of the incompetent kanúngos and a special inspector has been deputed to direct operations under the Collector's orders. The false rent entries in the jamabandis were first taken up. The Collector, by dint of hard work, has at last succeeded in making a beginning in getting at the true rents, but it will take time. The maps were found to be scarcely ever corrected. They are now being thoroughly taken in hand, and both patwáris and kanúngos are being sharply drilled. The tahsíl registers of past years will be of very little use (except, perhaps, in crop entries, but even this is uncertain) owing to the neglect of the rules by all concerned. The Collector (Mr. Whalley) is doing his best to put things in order.

Basti.—The work here, both in the tahsíls and in the field, was bad. The rules appear to have been neglected from the very beginning, and neither maps nor records nor registers are of any use. The expenditure on kanúngos in this district for the past nine years has been little better than a waste of money. The patwáris are nearly all incompetent. The records of the past nine years are for statistical purposes valueless. I have recommended certain measures for the training of the patwári and kanúngo staff. These measures are urgently needed; otherwise the new maps and records now being put into the patwáris' hands will soon become obsolete as their predecessors, and the heavy outlay on the resettlement and the new records-of-rights will yield no return. The sadr kanúngo is perfectly useless.

Gorakhpur.—The remarks made in the case of Basti apply equally to this district. The work is bad. As an instance of the sort of supervision exercised I found that the sadr kanúngo had not visited the circles of one or two supervisor kanúngos for two years. There was apparently little or no care taken either by supervisors or by the sadr kanúngo. The records of the past nine years are little better than waste paper, and the outlay on the kanúngo establishment has been to a great extent money wasted. The remarks regarding training of the patwári and kanúngo staff in Basti apply with equal force here.

Benares.—Work has commenced in the Chandauli tahsíl. In the Benares tahsíl the new (settlement) records had only *just* been finished. Work there was shortly to be started. The work of map correction in the Chandauli tahsíl needs attention. Although the settlement maps are only two years old, numerous changes have occurred in field boundaries. These changes were not shown in the maps. Great attention will be needed to the matter, otherwise the maps will soon drop out of date and the records are certain to share the same fate.

16. **Necessity of greater vigilance by District Officers.**—The foregoing remarks show how the quality of the patwári and kanúngo work varies in different districts. When it is borne in mind that the interests of the vast majority of the people are bound up with the records which the patwáris annually prepare, and that the statistics of crops, irrigation, rents, are those to which the settlement officer of the future will have to look for the materials on which to found his assessment, it will be evident that the supervision of the work of patwáris and kanúngos should be one of the first cares

of the District Officers. What is wanted is steady, systematic pressure. None can exert his pressure so well as the District Officers and their subordinates the tahsíldárs. What is wanted is vigilance on the part of the tahsíldárs, and a distinct understanding that they are just as responsible for the efficient working of the patwári and kanúngo staff as for any other branch of the tahsíl work: that inattention on their part will damage their prospects, and that care and attention will be rewarded. The moment the tahsíldár shows himself determined to have good work, every official from the sadr kanúngo downwards will put their shoulders vigorously to the wheel.

I have asked the Board of Revenue to sanction a scheme for divisional inspectors so as to ensure more direct pressure by the Director on the district establishment and thereby, among other advantages, secure uniformity in practice. The savings effected in the cost of patwáris' forms will enable this important additional staff to be entertained permanently. I hope the scheme may receive speedy sanction.

(*Oudh*, 12 *districts.*)

17. **Amendments in rules.**—During the year a considerable number of rulings on doubtful points in the rules were issued and several useful amendments were made.

18. **Difficulties about patwaris' salaries.**—The anomalous system of payment of patwáris' salaries current in Oudh has its difficulties. But these difficulties are being gradually overcome, and the patwáris' salaries are now being paid more punctually and regularly than before. In some districts trouble has been experienced in arriving at the actual amount of pay due to patwáris in consequence of the variety of sources from which, under the old *régime*, the patwáris drew these emoluments. These matters are now, however, in course of final settlement.

Audit of patwaris' salary bills.—The audit of the Oudh patwáris' pay bills is now up to date, and will be handed over to the Accountant-General in all probability by the close of the year.

Patwaris' forms.—Large savings have been effected, the cost for the year 1885-86 having amounted to Rs. 24,763-13-6, against an estimate and allotment of Rs. 37,160, and for 1886-87 to Rs. 14,700, against an allotment of Rs. 25,000. This saving was partly due to large stocks being in hand, and the cost next year may be somewhat higher. Other economies, however, are in contemplation.

19. **Kanungos' examinations.**—Examination of kanúngos and candidates for kanúngoships were held in all the four divisions of the province, with the following results :—

	Number examined.	Passed in all subjects.	Passed in some subjects.	Failed in all subjects.
Sadr kanúngos	...	...	...	...
Supervisor kanúngos	10	6	4	...
Registrar kanúngos	2	2	...	...
Assistant sadr kanungos...	2	...	2	...
Assistant registrar kanungos	3	1	2	...
Patwári candidates for kanungoships ...	3	2	1	...
Other candidates	57	18	39	...
Total ...	77	29	48	...

20. **Inspection of districts.**—During the year Colonel Pitcher, Deputy Director, inspected the whole 12 districts. The following are summaries of the results of his inspection :—

Lucknow.—Work found backward in the matter of collecting settlement figures for the opening lines of registers. The work of the sadr kanúngo and that of the registrar of Lucknow much wanting in energy. Work much better in Mohanlalganj, and Malihabad tahsíls and village papers fair.

Unao.—Great fault had to be found with the Tahsíldár of Purwa in connection with the reports from kanúngos against patwáris, and of not seeing that vacant circles were filled up with greater promptitude; also in regard to late filing of village papers. Papers examined were found in good order, and much improvement in other tahsíls. The settlement figures were completed here first of all districts.

Bara Banki.—With the exception of one man who for subsequent misconduct has since been discharged, the staff of this district showed extremely good work and ample evidence of attention on the part of the District Officer, Tahsíldárs, and sadr kanúngo was afforded.

Sitapur.—The sadr kanúngo has at last managed to make proper inspections, and Tahsíldárs have been very attentive to both patwarís and field-kanúngos' work with excellent effect. In Misrikh tahsíl the registrar had failed in his work and had to be dismissed. In other tahsíls the registration work was in good order.

Hardoi.—All tahsíls visited and the average of work extremely satisfactory particularly in Sandila, where the Tahsíldár gives more attention to the record work than any other Tahsíldár in the province.

Kheri.—A good average of progress and of work in all Tahsíls save Nighasan, where the sadr kanúngo had done excellent service by fearless reporting on bad work. It has to be admitted, however, that the circles are too large and more patwáris are to be appointed.

Fyzabad.—Considerable fault had to be found in this district with the want of sufficient supervision by sadr kanúngo and Tahsíldárs, leading to correspondence on the subject with the Local Government, but it is understood that measures have been taken to effect improvement.

Bahraich.—This district has now the benefit of a well-educated sadr kanúngo of great activity and extremely efficient as an inspector. The staff shows much improvement on last year, re-arrangements of some of the supervisors' circles and also of patwáris' circles have been found very necessary and are now being carried out.

Gonda.—No touring had been done by the sadr kanúngo, but a great deal of useful work had been carried out in revising circles and field work had been carefully checked by a good plan of registration. Settlement figures nearly completed. Registration work very fair. More attention required to close examination of returns. Field work very satisfactory.

Rae Bareli.—Work in this district, which has much improved, must still fall short of what it might be were the sadr kanúngo thoroughly efficient. Settlement figures and registration work in general very backward, and fault found with the examination of annual returns; but field work, with few exceptions, very satisfactory.

Sultanpur.—Circles in this district were extremely complicated and many very badly paid. Most useful work has been done, however, this year in revising both work and pay throughout the district. Hitherto returns from this district have been conspicuously late, and settlement figures are still far from complete, but next year may be calculated on showing good progress all round.

Partabgarh.—The district showed much progress against the state of affairs reported last year; but the supervisor kanúngos still require some weeding and more discipline, and attention had to be drawn to non-residence of patwáris and to the confusing intermixture of supervisors' circles as a consequence thereof. Registration work poor at the Sadr and at Kunda, showing want of attention on part of Tahsíldárs. Field work in most circles satisfactory.

Summary.—Of the 43 tahsíls in Oudh 34 were personally inspected by the Deputy Director and the remainder by his Inspector under close observation. The

field-books, account-books, and returns may now be said to be on the whole correctly and punctually prepared, crops and rents are carefully recorded, and the field-kanúngos are as a body efficient. A few of the sadr and registrar kanúngos are old men whom it is difficult to eliminate without hardship, and so long as they remain registration work is likely to suffer: but recent circulars will greatly systematize the examination of records after filing and the work of registration.

SECTION II.

Analysis of Districts.

21. **Pargana books.**—Last year pargana books in bound volumes were distributed to all districts for entry by the registrar kanúngos of the statistics which constitute the "analysis" here referred to. The entries are now being systematically made in all districts of the United Provinces.

22. **Maps showing irrigation resources of districts.**—To throw this analysis into a map form is not quite such an easy matter. The primary *desideratum* is a map or series of maps for each district, showing—

(i) the tracts which are permanently protected by irrigation against drought;

(ii) the tracts which are not protected by irrigation against drought;

and the condition of the people judged by rent and revenue payments, and the processes employed for the purpose. These maps would show at a glance where the pinch of scarcity would be felt most acutely.

I have given attention to this matter for some time past and am considering how to set about it. I hope during the present cold season to make a beginning.

SECTION III.

System of Collection of Revenue and Rental in Precarious Tracts.

23. Nothing can be usefully done under this head till the pargana books are well advanced. It would be included in the "analysis" of districts touched on in Section II.

SECTION IV.

Measures of Protection, including Arboriculture.

24. The measures of protection with which this Department deals are:—

(*a*) Reclamation of *úsar* land.

(*b*) Enclosure of land for fodder reserves.

(*c*) Improvement and extension of well-sinking.

(*d*) Arboriculture.

(*a*) and (*b*) are still in the experimental stage, more or less advanced.

(*c*) is in progress.

(*d*) is in full, systematic operation.

25. **Reclamation of 'usar' land.**—For the last four years the experiment of simply enclosing blocks of *úsar* land, letting the natural grasses grow, and planting out fodder trees on the small scattered patches of better land, has been going on in the vicinity of Cawnpore. The blocks of *úsar*, called respectively Júhi and Amramau, had been selected by Mr. Wilson and enclosed, and fodder trees planted out on suitable patches. As yet, however, the experiment has had little or no success. The grasses wither away in the cold weather and the rank *úsar* grass is of little or no value as a fodder; many of the young trees have died off, and the land appears on the whole very little improved by the four years' grace given to it. A year ago it was thought

advisable to try a new plan in one of the plots, leaving the other as it was. Accordingly, I requested Mir Muhammad Husain to try his hand on the Amramau plot, leaving Júhi alone. Mir Muhammad Husain adopted the plan of cultivating the land where cultivation was at all possible and keeping stock on the rest. So far I am glad to say there seems some ground to hope that his plan may yet succeed—that is to say, it may prove that there *is* a way in which *úsar* land may be treated so as to make it yield a fair return for the labour and capital spent on it. I have been over the land with Mir Muhammad Husain and have gone carefully into his accounts of expenditure and receipts. The operations have been conducted on purely commercial principles. The profit and loss account is as follows :—

Particulars of expenditure.	Amount.	Total.	Particulars of receipts.	Amount.	Total.
	Rs. a. p.	Rs. a. p.		Rs. a. p	Rs a. p.
To purchase of land 54 acres,	58 0 0		By sale of milk and farm produce ...	179 3 0	
,, farm cattle and implements, &c. ...	167 3 6		VALUATION OF STOCK.		
,, seed and manure ...	50 11 6				
,, stocking farm ...	660 7 6		By sale of working cattle and implements ...	161 3 6	
,, maintenance of stock ...	82 8 9		,, buildings ...	461 6 9	
,, farm building and well, &c. ..	514 13 6		,, live stock to be sold ...	905 7 6	
,, farm labour and supervision	493 4 9		,, dead stock ...	70 0 0	
,, depreciation on working cattle and building at 10 per cent. on cost of existing buildings and cattle,	84 4 3		,, land unreclaimed, 44 acres, Rs 47-3-6 ,, land reclaimed, 10 acres at 15 years' purchase, Rs. 375.	422 3 6	
,, interest on outlay at 5 per cent.	99 13 0				2,190 8 3
		2,211 2 9	By loss	...	11 10 6
Total ...	...	2,211 2 9	Total ...	...	2,211 2 9

These figures represent only one year's operations. Next year the income will, unless some unforeseen calamity occurs, be undoubtedly considerably larger and the area and value of the reclaimed land will be greater. The estimated value of the 10 reclaimed acres is based on actual offers of rent for the land.

The great point to establish is that there is a way of dealing with *úsar* lands by which it can be made to yield a return and add to the food resources of the country. Mir Muhammad Husain's method bids fair to succeed in this.

An experimental method, inaugurated last year, of planting trees in the worst of *usar* is so far making good progress, but it is too early yet to enlarge further on the subject.

26. **Enclosure of land for fodder reserves.**—The two blocks of infertile waste land which had been selected in the Aligarh district for experimental enclosure as fodder reserves were duly acquired by Government a year ago, and operations since then have been carried on under the directions of Mir Muhammad Husain, Assistant Director. Both plots have been enclosed: and the natural grasses are thus protected against the inroads of cattle. Several methods of dealing with the land are being tried: flushing with canal water in one plot so as to raise meadow grass; flooding with canal water in another (in the way which has proved successful in Amramau) so as to see if after a year's submersion the land may not be fit to grow rice; scraping away of the *reh* efflorescence in a third plot to see how long the *reh* will continue coming to the surface; planting fodder and other trees on a fourth plot on the Awa plan and sowing and dibbling exotic grasses all over the rest of the area. These processes are all going on over both plots. Time will show which, if any, will be successful. It is too soon yet to make any forecast.

I would bring to His Honor's notice the successful experiment of Mr. J. H. Fisher, Collector of Etáwah, in the matter of grass reserves. He has enclosed an area of

ravine land near Etáwah and by care and attention has succeeded in raising a goodly thicket of babul trees and large quantities of good fodder grass.

27. **Reh survey and plantations.**—As mentioned in last year's report, the retention or otherwise by Government of the plantations on the Awa estate was left pending decision after local enquiry as to whether the plantations had served their purpose. Mr. Wilson and Colonel Pitcher visited the spot in February and after careful inspection concluded that the plantations had sufficiently illustrated how by close preservation land otherwise bare could be covered to advantage with a growth of grass and trees. The plantations, therefore, were handed over to the Rája, and there is reason to hope that they will be maintained by him, as he already maintains others of his own accord, following the same plan.

28. The annual survey of 10 and quinquennial survey of 55 other villages affected by *reh* in the Akrabad pargana of the Aligarh district, projected to extend over six years, was completed in June, 1886, and the establishment has since been removed to the head-office at Cawnpore, there to complete the work of compilation and of mapping. Of 1,040 *reh* maps 824 have now been completed.

29. **Boring apparatus.**—At the commencement of the year the attention of District Officers was specially invited by circular letter to the advantages of trial borings in economizing expenditure in well-sinking. Eighteen districts responded favourably, but in many cases could provide no funds; and as the funds at the disposal of the Local Government, through this Department, were limited, the Government of India, on being appealed to, sanctioned an immediate grant of Rs. 1,000 and promised a further sum of like amount for the year 1886-87, which has since been definitely sanctioned. The Local Government further sanctioned Rs. 2,000 for the past year.

In all 18 complete and new sets have been purchased since November, 1884, of which the following have been supplied on payment to districts, either for district boards or for individuals :—

Benares	district	...	...	...	...	...	1 set.
Hardoi	,,	...	...	...	...	...	3 ,,
Fyzabad	,,	...	...	...	...	...	1 ,,
Kheri	,,	...	...	...	...	...	2 ,,
Sultanpur	,,	...	...	...	...	...	1 ,,
Bijnor	,,	...	...	...	...	...	2 ,,
Mirzapur	,,	...	...	...	...	...	1 ,,
Lower Ganges Canal		...	...	...	...	...	1 ,,
Military Works Department			...	...	...	...	1 ,,

There were 11 sets in hand previous to November, 1884, and most of these are now out on loan to districts and Court of Wards' estates.

Twenty-four men were trained by Mr. Copeland, the Court of Wards' Engineer, and sent out to work the apparatus as indented for. Success has been various, but wherever the men in charge have been closely watched and the work conducted with intelligence, the value of this great aid to successful and economical well-sinking has been recognised.

30. **Bull's improved dredgers.**—Efforts have been made to bring the merits of this most useful invention to the notice of zamindars. It has been shown at agricultural meetings and attracted particular attention at the April meeting of the North-Western Provinces Agricultural Association. Mr. Copeland estimates the quantity of work done in the same time to be 16 times that of the old pattern dredger, and this latter has always been fully appreciated. Eight have been purchased through the Department since April last.

Arboriculture.

31. The total grant made for arboricultural operations for the United Provinces for the year 1885-86 was Rs. 75,000, less Rs. 18,000 subsequently retrenched owing to financial pressure. The amount actually spent during the year was Rs. 52,942 ; receipts amounted to Rs. 44,518 : thus the total net expenditure was Rs. 8,424 only,

against Rs. 34,697 spent in 1884-85. Expenditure and receipts duly classified are shown by districts in appendix A. The following table shows totals for each division:—

Division.	Year.	*Expenditure.*				*Receipts.*		
		Avenues.	Groves and nurseries.	Lopping and felling.	Total.	Lopping and felling.	Fruits, grass, &c.	Total.
		Rs.	Rs.	Rs.	Rs.	Rs	Rs.	Rs.
Meerut	1885-86	8,808	1 267	264	10,339	24,000	987	24,987
	1884-85	10,429	1,978	411	12,818	11,187	705	11,892
Rohilkhand	1885-86	4,632	1,122	7	5,761	2,404	1,202	3,606
	1884-85	7,185	1,019	51	8,255	2,720	1,447	4 1'3
Agra	1885-86	5,711	1,820	16	7,547	4,779	1,014	5,793
	1884-85	8,950	2,125	70	11,145	3,867	820	4,687
Allahabad	1885 86	7,846	1,693	152	9,691	3,713	1,135	4,848
	1884-85	9,402	1,980	399	11,781	3,494	1 020	4,514
Benares	1885-86	3,814	1,016	131	4,461	1,172	1,242	2,414
	1884-85	4,083	1,802	123	6,008	1,322	3,207	4,5: 9
Jhánsi	1885-86	7,049	799	...	7,848	848	309	657
	1884-85	8,141	1,308	40	9,549	534	360	894
Kumaun	1885-86	126	295	...	421	...	...	...
	1884-85	117	445	...	502	...	...	...
Lucknow	1885-86	1,040	993	63	2,096	338	230	568
	1884-85	1,729	1,170	43	2,942	1,227	322	1,549
Fyzabad	1885-86	1,264	174	7	1,445	305	77	382
	1884-85	1 689	221	5	1,915	128	123	251
Sitapur	1885-86	1,370	219	44	1,633	455	26	481
	1884-85	1,466	256	72	1,794	696	12	708
Rae Bareli	1885-86	1,428	233	39	1,700	373	319	692
	1684-85	1,895	252	'50	1,697	266	366	632
Total ...	1885-86	42,588	9,631	723	52,942	37,867	6,631	44,518
	1884-85	54,686	12,676	1,264	68,526	25,447	8,382	33,829

32. As in previous years, the subject evidently receives more care and attention in the districts of the Meerut Division than elsewhere, and district details have been given in appendix A. in view to drawing into greater prominence the contrasts observable. The expenditure is mostly on avenues and the income chiefly derived from lopping and felling. There is no doubt that a greater portion of the annual expenditure can be recouped by judicious pruning and removal of old and badly-grown trees than is at present the case with many districts.

Avenues.—The total length of roads in the United Provinces is 6,892 miles, of which 3,387 miles were protected up to the end of the preceding year; 282 miles of avenue were added during the year, leaving 3,223 miles still to be planted. Nearly 84,000 trees were planted in 1885-86. In the preceding year 1,22,545 trees were planted, of which over 71 per cent. are reported as surviving. The length of roads and the number of trees planted in each division is shown in the following table :—

Division.	Total length of road.	Length planted up to the end of 1884-85.	Length planted during the year 1885-86.	Length unplanted up to the end of 1885-86.	Number of trees planted during the year 1885-86.	Number of trees planted in 1884-85.	Number of trees which survived out of those planted in 1884-85.
Meerut	741	349	19	373	4,898	18,128	15,378
Rohilkhand ...	547	264	47	236	10,256	14,840	12,139
Agra	1,206	711	50	445	13,478	24,803	14,416
Allahabad	1,052	417	47	588	8,654	16,418	10,570
Benares	838	503	21	300	14,201	15,087	12,389
Jhánsi	448	276	9	163	5,086	6,103	3,515
Kumaun	145	60	4	81	1,985	2,855	2,040
Lucknow	596	230	32	334	14,905	11,199	7,786
Fyzabad	341	159	8	174	1,891	1,009	1,224
Sitapur	723	269	33	421	6,885	10,608	7,184
Rae Bareli ...	260	149	12	99	2,097	1,400	1,104
Total ...	6,892	3,387	282	3,223	83,780	1,22,545	87,745

33. **Groves.**—The total number of groves maintained during the year was 47, against 51 maintained in the preceding year; four new groves were planted—one in Etáwah, one in Fatehpur, one in Ballia, and one in Bara Banki, while eight of the old groves were removed from operations. The number and area of groves maintained in each division during the year 1885-86 are shown below :—

Division.	*Number of groves.*	*Area.* Acres.
Meerut	4	35·85
Rohilkhand	3	·90
Agra	8	8·85
Allahabad	5	11·85
Benares	6	30·95
Jhánsi	14	43·02
Kumaun	*Nil*	*Nil*
Lucknow	1	·70
Fyzabad	1	1·25
Sitapur	4	1·25
Rae Bareli	1	1·25
Total ...	47	135·57

34. **Nurseries.**—One hundred and seventy nurseries were maintained during the year, against 181 maintained in the preceding year. Nine were new, and of these four were opened in Moradabad alone, while 20 of the old nurseries were closed; four of these latter lay in Etáwah and 10 in Azamgarh. The total number of nurseries in each division and the number of young trees are shown in the following table :—

Division.	Number of nurseries.	Number of plants added during the year 1885-86.	Number planted out during the year 1885-86.	Number in stock at the end of the year 1885-86.
Meerut	13	87,980	8,231	106,524
Rohilkhand	23	31,922	10,827	45,026
Agra	33	36,880	15,015	78,645
Allahabad	34	15,089	15,518	40,246
Benares	13	10,166	5,228	27,530
Jhánsi	13	4,896	4,499	10,940
Kumaun	6	200	15,97	2,834
Lucknow	13	28,184	14,697	54,892
Fyzabad	16	3,711	3,518	15,358
Sitapur	9	1,808	990	6,132
Rae Bareli	4	6,227	2,630	18,558
Total	170	2,27,013	82,750	4,06,685

Nurseries are comparatively expensive institutions, and it may be questioned whether young trees could not more often be purchased or procured locally at cheaper rates.

SECTION V.

Agriculture, including Experiments and Farms.

35. **Meerut Demonstration Farm.**—The committee and the departmental servants in charge of the farm remained unchanged throughout the year. Regular monthly meetings were held to pass accounts and give instructions to the Superintendent; frequent references were made to head-quarters and reports submitted.

It cannot be said that, as was hoped, the farm has yet commenced to pay expenses, and with salaried labour such a result must under the most favourable circumstances be difficult to obtain where the cheaper staples alone are cultivated. The seasons, moreover, were not favourable, wheat in particular having suffered severely from untimely hot winds in common with the wheat crops of the Meerut Division.

36. The rabi crops covered an area of 37½ bighas, in which the staples grown were wheat, oats, barley, potatoes, white linseed, mangold-wurzel, and winter maize. Though the outturn on the whole was poor in quantity, in quality some of the wheat grown in land green soiled with sanai (*Crotolaria juncea*) secured the first prize at the Nauchandi fair.

Ensilage was prepared with fair success in three silos, the fodders silaged being grass in two silos and *chari* in one. The total quantity was about 250 maunds, of which about two-thirds were realized as good fodder.

The services of the bull kept on the farm appear to have been appreciated by a good number of cattle-owners, and the visitors to the farm are reported to have been upwards of 700. Ploughs were lent to neighbouring cultivators, and it is remarked by the committee that mangold-wurzel and white linseed, both comparative novelties in the Meerut country, have attracted attention from the neighbours.

37. The demonstration farm has for one thing inspired emulation. A young mahájan of Meerut has organized his *sir* land into an experimental station on lines similar to that of the Cawnpore station, to which he paid a visit, and has set about the work with an earnestness and absence of all attempt to attract official notice that give hopes of perseverance, the point in which such efforts mostly fail. Since then other native gentlemen have commenced similar operations, and it seems quite possible that experimental agriculture may some day become popular with native landowners as an earnest pursuit rather than a mere pastime.

38. **Cawnpore Experimental Station.**—The station remained throughout the year in the charge of Mir Muhammad Husain, M.R.A.C., by whom the usual half-yearly reports were submitted. For the kharíf the season proved very unfavourable to sorgho and maize; cotton fared indifferently well. Speaking generally, the kharíf crops gave poor results and a consequent scarcity of winter fodder ensued, which, as events proved, had its value in proving the utility of ensilage. This latter has now become a factor in the economy of the station of considerable value: cattle were fed on ensilage entirely for weeks together and quantities were given and accepted by cartmen travelling on the Grand Trunk Road near the station.

39. Amongst experiments, those with woollen refuse from the Cawnpore Mills as a manure gave increasingly good results, and the usual comparative experiments with manures carried through successfully. Experiments with maize cultivated as in America and with sugarcane cultivated as in the Mauritius proved in both instances failures. From varied trials with cotton more facts were accumulated in regard to production under different modes of cultivation; oilseeds grown alone and mixed were tested for outturn, and so also were certain mixed kharíf crops. The plots of kharíf crops sown to test produce were maintained.

40. The following is a summary of the rabi season operations:—

About 13½ acres were devoted to various experiments with wheat and 7½ acres more to wheat grown under ordinary conditions.

On the best of the experimental plots the average yield was 33·6 bushels per acre as against 30 bushels considered a good yield in Europe, and this too in the face of unfavourable conditions for what at one time promised to be a superlatively fine harvest greatly retrograded under the influence of dry strong winds acting on the ripening grain.

In the annual repetition of certain set classes of experiments going to form a series from which eventually accurate deductions may be drawn, the results have this year been classified, and will in future be always classified, so as to show plainly the net profit on each operation. A fact brought out very clearly so far is the advantage of alternating crops of wheat with other grains in place of repeating wheat alone year by year. This is no discovery, but it is a great advantage to have the facts at hand

for pointing axioms such as that of the necessity of rotation of crops. The plots on which maize and wheat alternate exhibit constantly a larger yield than those on which wheat alone is grown from year to year.

In manures some new experiments were instituted to test the value of oil-cake applied direct to the land as compared to feeding cattle with it and applying to the land the resultant. Figures are greatly in favour of using cattle as an intermediary, and here again the result was only such as might have been expected; still it is necessary to have figures to enforce the truth.

In green-soiling experiments the value of growing lucerne after barley as a preparation for wheat is one of several points of value made.

The Lois Weedon or Jethro Tull system, under which wheat is grown without manure, but more profitably than in the ordinary manner by leaving fallow strips between cropped strips, the fallow strips being carefully tilled and cropped in their turn in alternate years, has now for the third season given fair results, and may possibly prove useful for application to outlying village lands where manure is not procurable.

Barley after lucerne and oats on land manured with woollen refuse gave excellent results. The profit in the case of oats was estimated to be greater than that of wheat on a like acreage.

Messrs. Praschkauer and Co., London, who have extensive dealings in seeds in the European market, and whose representative visited the farm last year, kindly supplied a variety of field seeds for experiment, such as field beans, peas, Egyptian peas, and canary seed. The only kind, however, that succeeded was canary seed, which gave a very good crop, and which is largely imported into England. Mangold-wurzel and Belgium carrots were grown from English seed, and in both cases crop paid well.

Ensilage, as has been elsewhere remarked, is now beyond the experimental stage and forms part of the working system of the station.

An interesting experiment in the pods of the *Inga dulcis* as a food for sheep and cattle was carried out. Sheep fed for upwards of three weeks almost exclusively on the sweet mucilaginous pods of the *Inga dulcis* gained in weight, and as the tree yields its pods in large quantities and is very hardy, its more extended plantation in waste places and on grazing lands seems desirable.

41. Of implements successfully experimented with may be noted an improved Bull's dredger and a centrifugal sugar-separator.

42. **Saharanpur gardens.**—Receipts increased while expenditure was reduced, thus showing improvement in the financial position of the gardens. The Hill garden at Arnigadh has begun to yield income.

On the whole the season was a fair one and the crops throughout good. Acclimatized vegetables in particular were most satisfactory and indicate progress in a very important line of usefulness.

Plants, seeds, drugs, and fruit trees were all in increased demand; new and interesting additions were made to the gardens and to the Herbarium.

In cereals and textiles experiments were conducted, notably with cottons of a hybrid cotton first grown at the gardens and of which a quantity was forwarded to the Colonial and Indian Exhibition for submission to experts. "Spider silk," a natural product found in the hills, was also collected by the Superintendent for the Exhibition; and indeed for a considerable part of the season the Superintendent and his staff were actively employed in preparing a collection of raw products, &c., for the Exhibition, the number of exhibits sent forward amounting to Rs. 1,038. Duplicates of part of the collection were at the same time sent to the Museum at Lucknow.

The Superintendent undertook extensive tours both in the hills and plains, of which separate reports have been submitted.

43. **Lucknow gardens.**—The year was one of very fair success under adverse conditions, the gardens having been wrecked by a storm in the previous year. Receipts exceeded those of the previous year and the net cost amounted to Rs. 3,429 only. The fruit crop was poor, but vegetable farm and flower culture gave good results. The demand of seed and plants continues to improve.

Special attention continues to be given to date and orange culture, and is also being directed to the paper mulberry of Japan, a valuable addition to the fibre-yielding plants of India.

44. **Motesur fruit orchards (Kumaun).**—During the year the following work was carried out:—Seventeen pounds of apple seed were sown, producing 10,000 seedlings which will be fit for grafting next year, and 16lb. more of seed have been sown, the result of which has yet to be reported.

Five thousand apple trees and 537 pear trees were grafted, while 4,921 apple and 282 pear trees were distributed.

Of chestnut trees 162 were distributed and 191 seedlings were raised.

The demand for grafted trees is increasing beyond the power of the gardens and comes from natives of all classes. To teach natives how to treat, prune and care for their trees a trained gardener has been appointed, whose pay is met from the District Forest Fund. The demand for fruit is reported to be very brisk.

Potatoes were somewhat of a failure throughout the hills, yet 100 maunds for seed were distributed from the crop raised in the nursery. Fresh varieties of seed imported from England have been laid down this season.

45. **Cultivation of the mulberry tree for fodder.**—The mulberry is said to be largely cultivated on the shores of the Mediterranean for fodder. Mr. Gollan was requested to make an experiment with trees grown one foot apart and pollarded at intervals extending over one year. It was found that cattle would not eat the first cuttings, the leaf and stalks being too coarse, but eat those cut with stems 9 to 18 inches long. Cuttings in July, 1885 gave 257 maunds and 196 maunds per acre of the *Morus multicaulis* and of *Morus sp.* (from Cashmere) respectively; these, however, were the coarse cuttings with stems 6 feet long, which do admirably for basket-work. Further cuttings in September, 1885 and in March and July, 1886 gave a total of 70 maunds and 105¼ maunds respectively per acre. As the tree is extremely hardy, it may prove a useful addition to our fodder supplies.

46. **Date palms.**—In G. G. O. No. $\frac{30A.}{15-9}$, dated 1st May, 1886, it was directed that any experiments with date palms should be noted in the annual report. The experimental date plantation at Lucknow is being extended year by year, and the number of plants was raised, during the past year, from 440 to 890.

Four hundred and twelve seedlings were supplied by the Lucknow to the Sahâranpur gardens, and these latter have indented for 500 offsets of the best varieties from the Persian Gulf. Superior varieties of seeds have been received from Bombay.

47. **Forecast of special crops.**—During the past year regular forecasts of the condition and prospects of the three principal export crops, cotton, oilseeds, and wheat, have been received from selected zamindars all over the United Provinces. The number of reporting zamindars during the year has been 434. Their reports have been of the greatest value and have furnished information which no system of official reports in the old fashion could satisfactorily supply. The gentlemen who have thus aided us have now, I think, got entirely rid of the idea that the information which they give can in any way be connected with the assessment of their estates, and consequently

we get from them a perfectly free expression of opinion and the results of the best enquiries which they can make.

48. **The North-Western Provinces Agricultural Association.**—During the year an agricultural association for the North-Western Provinces has been founded. It consists of 86 members, representing 77 tahsils of 31 districts in the North-Western Provinces. The whole story of the association has already been told in an official report dated 16th April last. The members of the association met for the first time at the head-quarters of this Department on 15th—17th April, 1886. Resolutions were passed, rules were framed, and the general lines of co-operation with this Department were discussed and laid down. His Honor the Lieutenant-Governor consented to be the patron of this association. Since April a good deal of work has been done by the members, and the record gives ground for the hope that this institution may yet do good to the country. In every important matter concerning agriculture and cognate matters I have consulted the members and I have received assistance and advice in a manner and to an extent which, sanguine as I was, I had not anticipated. The members have been most forward in co-operating with us. In the ploughing campaign they have been most zealous and active. During the illness of Mir Muhammad Husain, Assistant Director, three of them came in rotation and took full charge of the Cawnpore experimental station, conducting all the operations and carrying on all the correspondence in a way that left nothing to be desired. I have had a committee of them sitting on cases of application for patents for invention of agricultural implements; a committee of eight of them are assembling at the forthcoming horse and cattle fair at Batesar to assist in the management and act as judges in the award of prizes. Two of them have established experimental and demonstration farms on their estates and are busy carrying out the agricultural improvements which have been proved to be successful and of utility at Cawnpore. Other zamindars, not members of the association, have, as has been described already, established similar farms. One member of the association has established a show shed and mart for the sale of improved ploughs on one of his estates. These are all good signs, and I am hopeful that the field of usefulness will, year by year, be enlarged, and that the association will do credit to the name of its patron. I intend, if possible during the coming season, to introduce the association to other spheres of useful work.

The policy which I have in view is to make this association our agents for the prompt dissemination among the cultivating masses of all useful information on agricultural matters, and our *collaborateurs* in establishing improved methods of farming. The members have begun to appreciate the objects in view, and I believe they are really desirous of forwarding them. Once the members have succeeded in establishing a *cordon* of agricultural stations all over the provinces, the Cawnpore experimental station will have done its work and may be dispensed with.

SECTION VI.

Introduction of Agricultural Improvements.

49. **Agricultural shows.**—Along with the feature of private experimental farms may be noted this year the initiation of private agricultural meetings,—that is to say, gatherings for the purpose of showing produce and implements organized on two estates in Rae Bareli and Sultanpur respectively by landowners independent of either official aid or even of official suggestions. We only know from requests to send a few implements that the gatherings took place, and doubtless they were extremely modest efforts; still as small beginnings of awakened interest in agricultural progress on the part of landowners they are of interest.

Of the large annual agricultural shows engineered to some extent by officials, there were 11, *viz.*, Meerut, Saháranpur, Moradabad, Aligarh, Bulandshahr, Rae Bareli, Bara Banki, Partabgarh, Lalitpur, Muzaffarnagar, and a Court of Wards'

agricultural meeting at Sultanpur. The annual horse and cattle fair at Batesar was also utilized for exhibiting implements.

All of these fairs, excluding those privately arranged, were attended by one or more of the officers of the Department to aid in arrangements and to exhibit implements and farm produce. That at Rae Bareli was the first ever held there, and was in many respects a model of good arrangement at the hands of a committee of native gentlemen; so also was that at Moradabad, where art-ware formed an important section and valuable prizes were offered for certain desired improvements in the local art-ware with partial success. Mir Muhammad Husain, Assistant Director, was further deputed to attend the show held at Barapur in Bengal.

50. **Distribution and sale of implements.**—One hundred and ten ploughs (Watts and Duplex) were sold direct during the past eight months and 18 sent out on loan, and improved ploughs are being worked by *bonâ-fide* cultivators in nearly every district. The improvement worked by the superior implement necessarily requires some length of time to carry conviction to men who are by nature extremely cautious of embarking in new enterprises. The plan, however, of sending trained men out to plough with improved implements in the fields alongside of cultivators using the ordinary implements appears to be bearing good fruit. Men have been again sent this year to 11 districts, and at the particular request of zamindars to four other districts. Several members of the agricultural association both from Oudh and from the North-Western Provinces sent men at their own expense to the Cawnpore agricultural station to be trained.

Up to date the number of ploughs indented for this season as a result of sending men out amounts to 140, against 108 in the year previous, and it is satisfactory to note that the earliest indents were from Sultanpur and Partabgarh districts, to which similar missions were sent last year, where, therefore, the people had had plenty of time to discuss results and were not merely running after novelty. In this connection it may be mentioned that the various parties sent out have received great help from district members of the agricultural association and from the zamindar correspondents of the Department.

Twenty-five water-lifts were sold and 16 sent to the Canal Department for trial and exhibition.

Four American sugar-evaporators were sold, the same number as in previous year.

Of cheap chaff-cutters at Rs. 35 each, seven and of grain-kibbling machines at the same price 10 were sold. These implements, which are imported from England, are growing in favour.

51. **Distribution of selected seeds.**—It was mentioned in last year's report that 891 maunds of wheat (Muzaffarnagar selected soft white) had been supplied for the rabi of 1885-86. The reports from recipients have been very encouraging. Amongst others the Collector of Gorakhpur, to whom about 300 maunds were sent, reports that "the cultivators are perfectly satisfied with the seed. They take it to be the finest they have ever seen, and it is very popular amongst them."

Six special prizes for wheat, the produce of seed distributed by the Department, were offered at the Moradabad show and were adjudged. This system it is proposed to extend. Indents of seed for the coming rabi were received for about 2,000 maunds, of which about 800 maunds have been sent out.

Other seeds have been distributed as under:—

	lb.
Cape oats	92
Barley	41
Sorghum	517
Nankin cotton	712
Lucerne	17
Guinea-grass	37

and other seeds in smaller quantities.

Though Nankin cotton is still applied for and distributed, it may be noted that the regiments of Central India Horse, which were the first to utilize it for purposes of khâki uniform, have now given it up in favour of cloth dyed with a khâki dye of recent invention. Several new dyes (khâki) have of late been introduced, and one kindly communicated to the Department by Mr. Otto Hehner, F.C.S., of London, is now under trial which promises well, and is perhaps the least expensive of all in application.

52. **Agricultural improvements in Court of Wards' Estates.**—Operations were carried on by the Court of Wards' Engineer in the following districts:—Allahabad, Gorakhpur, Cawnpore, Farukhabad, and Mainpuri. The total expenditure, exclusive of the Engineer's salary and the salaries of his establishment, amounted to upwards of Rs. 35,000, and the work effected consisted chiefly of well-sinking and the construction of embankments. The outturn of work was considerable, but on a review of the resulting cost and in consideration of there being fewer estates in the current year to bear a proportionate share of the cost of the Engineer, the Board of Revenue has terminated the appointment of Engineer from the 30th September, 1886. Work will for the future be carried out by managers aided by such superintendence as this Department may from time to time be able to afford.

I feel bound here to say that the experiment of an Engineer for Court of Wards' estates has not worked satisfactorily. Mr. Copeland was an unfortunate selection in every way to begin with. But even a good Engineer would have failed to achieve satisfactory results on a system which, like this, had in it all the elements of failure and none of success. A year ago I expressed my dissatisfaction both with the man and the system demi-officially to the Board of Revenue.

SECTION VII.

Registration of Traffic.

53. Registration of the following traffic was effected during the year 1885-86 :—

(*a*) Traffic with Tibet and Nepal.

(*b*) Traffic crossing the Bengal frontier by the rivers Ganges and Gogra.

(*c*) Traffic passing over the Ganges and Jumna Canals.

(*d*) Traffic by rail with the ports and neighbouring provinces as well as among the different divisions of the United Provinces.

(*a*) **Traffic with Tibet and Nepal.**—The present is the 10th year of registration. The total trade amounted to 39 lakhs of maunds, of which over 98 per cent. was engrossed by Nepal. The total traffic in the preceding year amounted to 37 lakhs of maunds. The increase occurred in grain, oilseeds, and fibres imported from Nepal and cotton-goods and salt exported to Nepal :—

	Mds.
Increase in grains imported from Nepal	3,51,153
Ditto oilseeds from ditto	1,12,919
Ditto fibres ditto	25,929
Increase in cotton-goods exported to Nepal	4,227
Ditto salt ditto	7,647
Less decrease in timber imported from Nepal	3,06,620

The Bengal and North-Western Railway has apparently already stimulated Nepal trade.

(*b*) **River traffic with Bengal.**—This traffic was gauged at Ballia on the Ganges and Maniar on the Gogra by trained muharrirs stationed in boats at each of the stations named.

The total traffic by the river Ganges amounted to 15 lakhs of maunds. The despatches consisted of cotton, gram and smaller grains, oilseeds, sugar (principally

unrefined), and Mirzapur stone; while the bulk of the imports was made up of rice, salt, sugar (refined), tobacco, and wood. The transactions were for the most part confined to marts of the two provinces in the immediate neighbourhood of the registering station.

The traffic on the Gogra amounted to over 67 lakhs of maunds. It consisted chiefly of exports of grains, principally wheat and gram, oilseeds, sugar (unrefined), and timber. Much of this was consigned to the port of Calcutta and would reach its destination either direct by river or by taking the rail at Patna. The imports formed but one-tenth part of the total traffic and consisted for the most part of Cheshire salt, tobacco, iron, and gunny-bags.

(*c*) **Canal traffic.**—This traffic was registered on the block system in the office of Traffic Manager, Ganges Canal, and Executive Engineer, Agra Canal, by muharrirs deputed from this Department. The traffic over the Agra Canal consisted chiefly of stone from Agra in exchange for grains and gur received from the Gurgaon and Dehli districts. The total traffic on the Ganges Canal amounted to 13½ lakhs of maunds. The chief consignments were of cotton, sugar (gur), salt, and grains to Cawnpore, with grain and building materials sent from one wharf to another in the Meerut Division.

(*d*) **Rail-borne trade.**—Registration of this traffic on the block system continued in the Audit Offices of the East Indian Railway, Oudh and Rohilkhand Railway, North-Western Railway, and in the offices of the Examiners of Accounts, Cawnpore-Achnera and Rajputana-Malwa Railways. The number of external blocks was increased by five. Sindh, which was formerly included with the Panjáb and Berar, Hyderabad, Mysore, Madras and Bombay Presidencies, which formerly appeared as one block under the name of Southern India, were formed into separate blocks. The number of internal blocks remained unchanged. During the year the Bengal and North-West Railway was extended to Patna, the Oudh and Rohilkhand Railway was extended to Saháranpur, and the Midland line completed to Chaura station on the Jumna river opposite Kálpi. Of the Bengal and North-West Railway stations, those lying in Bahraich and Gonda were included in the Oudh block, those in Basti and Gorakhpur in the Benares block, and those lying in Behar outside the province were included in the Bengal block. Of the Oudh and Rohilkhand Railway extension the stations from Saháranpur to Lakhsar were included in the Meerut Division and the rest in the Rohilkhand Division, while the whole of the Midland line up to Chaura was included in the Allahabad block.

The total traffic during the year which these provinces transacted with the ports, the neighbouring provinces, and Native States amounted to 463 lakhs of maunds, against 371 lakhs of maunds in the preceding year. Nearly one-half of this increase was due to increased exports of wheat, which during the year reached 81,78,575 maunds, the highest yet recorded. Of exports, next to wheat, the greatest increases occurred under cotton, rice, gram, and linseed; of imports, the greatest increases occurred under cotton-goods, coal, and railway plant and rolling stock:—

Exports.	*Lakhs of Mds.*	*Imports.*	*Lakhs of Mds.*
Total increase ...	... 74	Total increase ...	... 18
Increase under wheat ...	... 43¾	Increase under cotton-goods	... 1¼
Ditto rice ...	... 5	Ditto coal ...	... 11¼
Ditto gram ...	... 16¼	Ditto railway plant and rolling stock ...	... 7
Ditto cotton ...	... 2¼		
Ditto linseed	... 10¼		

SECTION VIII.

MISCELLANEOUS.

54. **Octroi** under the new system is being tried in Sháhjahánpur and Chandausi. It has had a partial success in Saháranpur. It is hoped that the new method, in a modified form, may be introduced in these towns, in which, like Chandausi, octroi is

being established. It is easier to start it in towns where octroi is coming in for the first time than in towns where the current barrier and refund systems have been for years in vogue. The placemen under the existing *régime* naturally throw every possible obstacle in the way of an improvement which economizes establishments and makes pickings and peculation difficult.

55. Lucknow and Indo-Colonial Exhibitions.—The exhibition work of the Department for the past year was extremely heavy. In addition to the work for the London Exhibition, the aid of the Department was solicited and afforded in the organization of an exhibition of the arts and manufactures of Oudh and of the arts of the North-Western Provinces, which was opened at Lucknow from the 4th to the 11th December, 1885, in the Canning College.

This Exhibition, which was opened by His Honor the Lieutenant-Governor and was further honoured by a visit from His Excellency the Viceroy, was organized at the entire expense of the Taluqdars' Association and of the Lucknow Municipal Board in equal shares. It was so arranged that the greater part of the exhibits intended for the Indian and Colonial Exhibition were displayed at Lucknow and despatched from there direct to London.

The utility of such an Exhibition was amply shown, apart from the large attendance, in the numerous examples of art-ware displayed, which were novel even to those accustomed to collect in these provinces, and also in the large sales and larger demand.

Those exhibits reserved for London naturally formed a considerable proportion. It is probable that had these latter been for sale locally, the greater number of them might have been disposed of.

To meet wishes which were at this time very generally expressed, the Museum Committee undertook to procure art-ware according to samples displayed in the Museum for visitors, and native workmen have benefited up to date by the measure in the sale of work amounting to over Rs. 3,000.

The work which this Department had to do in connection with the London Exhibition involved the following:—Arranging for the designing and construction of the carved wood and stone screens to surround the courts; collecting, cataloguing, packing and despatching the whole of the art exhibits proper, of economic products, and rough manufactures of specimens of minerals, of ethnological exhibits and of the exhibits of all other departments in the provinces. Some idea of the labour involved, apart from voluminous correspondence, may be gathered from the following:—

Number of exhibits	...	...	...	2,539
Ditto of packages	...	...	...	161
Weight of ditto	...	..	...	1,266 maunds

The entire catalogue and lists, though carefully despatched three months in advance under registered cover, were reported by the London Committee not to have arrived, and at the last moment fresh lists had to be made out.

It is believed that, with the exception of a slight accident on boardship to one of the screens, all else arrived safe, but up to date the Department has received no intimation and no acknowledgment of any sort.

In selecting the exhibits, the plan was adopted of awarding prizes to the best samples of art-ware tendered for sale in addition to the price paid, due notice having been previously given of the sums to be awarded. This was done in conjunction with medals distributed by the Lucknow Exhibition Committee, and the result will doubtless be to stimulate competition on all future occasions.

56. Provincial Museum.—Considerable progress was made during the year in nearly every branch, and the Exhibition held at Lucknow in December afforded an opportunity, which was not lost on the committee, of renewing many of the specimens of art-ware and of introducing fresh types.

The additions to the Library numbered 613 and to other sections 6,065, chiefly by donations. The number of visitors was close on half a million.

A classified catalogue of the birds was prepared by Mr. George Reid (a member of the committee) and sent to press. This catalogue will be of great value to collectors and to other museums, as indicating, amongst other matters, the specimens on hand which can be spared for exchange with specimens which the Provincial Museum may not happen to possess.

57. **Applications for leave to file specifications of inventions.**—During the year the Home Department of the Government of India sent 15 applications for patents of inventions of agricultural contrivances to this Department for report. Each case was examined on its merits and duly reported on.

GENERAL.

58. In the early part of the year Colonel Pitcher's position and responsibilities were changed from those of Assistant to those of Deputy Director. This change of title is amply justified by the vigour, tact, and ability with which Colonel Pitcher has always co-operated with me.

Mir Muhammad Husain has performed his arduous duties during the year with his accustomed zeal and intelligence.

Babu Lachman Parshad, Personal Assistant, has worked to my entire satisfaction.

59. Mr. McLaughlin, who was dismissed in August, 1885, was afterwards prosecuted, at the instance of this Department, for embezzlement. He was convicted and sent to jail.

Mr. Copeland was removed from his office of Assistant Engineer to the Court of Wards on the 30th September last.

I have the honor to be,

SIR,

Your most obedient servant,

DONALD SMEATON,

Director.

APPENDIX A.

Statement showing arboricul ural expenses and receipts in each district of the North-Western Provinces and Oudh during the year 1885-86.

District.	Expenditure on—				Receipts by—		
	Avenues.	Groves and nurseries.	Lopping and felling.	Total.	Lopping and felling.	Fruits, grass, &c.	Total.
Dehra Dún ...	221	...	116	337	...	...	...
Saháranpur ...	768	504	12	1,344	1,281	3	1,284
Muzaffarnagar ...	2,345	313	4	2,662	2,481	324	2,805
Meerut ...	1,382	58	...	1,440	5,644	97	5,741
Bulandshahr ...	1,306	255	...	1,561	10,177	226	10,403
Aligarh ...	2,786	77	132	2,995	4,417	337	4,754
Total ...	8,808	1,267	264	10,339	24,000	987	24,987
Bijnor ...	650	25	...	675	186	490	676
Moradabad ...	586	590	1	1,177	1,007	5	1,012
Bareilly ...	1,950	...	...	1,950	645	265	910
Budaun ...	626	104	5	735	401	328	729
Sháhjahánpur ...	747	326	1	1,074	106	204	310
Pilibhít ...	73	77	...	150	59	...	59
Total ...	4 682	1,122	7	5,761	2,404	1 292	3,696
Muttra ...	1,750	252	...	2,002	667	50	717
Agra ...	642	1,242	...	1,884	1,529	246	1,775
Mainpuri ...	909	86	7	952	1,414	183	1,597
Farukhabad ...	664	...	9	673	278	343	621
Etáwah ...	999	125	...	1,124	135	25	160
Etah ...	747	165	...	912	756	167	923
Total ...	5,711	1,820	16	7,547	4,779	1,014	5,793
Cawnpore ...	1,112	192	22	1,326	1,359	53	1,412
Fatehpur ...	936	134	...	1,130	707	142	849
Bánda ...	2,502	511	31	3,044	294	311	605
Allahabad ...	769	416	...	1,185	212	334	546
Hamírpur ...	1,130	152	68	1 350	338	48	386
Jaunpur ...	1,337	288	31	1,656	803	247	1,050
Total ...	7,846	1,693	152	9,691	3,713	1,135	4,848
Azamgarh ...	289	154	...	443	636	330	966
Mirzapur ...	1,190	85	...	1,275	11	364	375
Benares ...	629	...	53	682	414	454	868
Gorakhpur ...	606	444	...	1,050	...	27	27
Basti ...	224	48	...	272	30	17	47
Gházipur ...	204	95	75	374	34	40	74
Ballia ...	172	190	3	365	47	10	57
Total ...	3,314	1,016	131	4 461	1,172	1,242	2,414
Jalaun ...	1,491	310	...	1,801	273	24	297
Jhánsi ...	2,045	253	...	2,298	48	205	253
Lalitpur ...	3,513	236	...	3,749	27	80	107
Total ...	7,049	799	...	7,848	348	309	657
Kumaun ...	126	55	...	181	...	...	...
Garhwál ...	...	240	...	240	...	...	...
Tarái ...	...	...	...	...	...	...	...
Total ...	126	295	...	421	...	...	...
Total, N.-W. P. ...	37,486	8,012	570	46,068	36,416	5,979	42,395
Lucknow ...	397	650	22	1,069	86	92	178
Bara Banki ...	376	255	21	652	139	126	265
Unao ...	267	88	20	375	113	12	125
Total ...	1,040	993	63	2,096	338	230	568
Fyzabad ...	323	75	7	405	94	28	122
Bahraich ...	641	53	...	694	116	31	147
Gonda ...	300	46	...	346	95	18	113
Total ...	1,264	174	7	1,445	305	77	382
Sitapur ...	588	117	...	705	239	24	263
Hardoi ...	782	...	42	824	184	1	185
Kheri ...	...	102	2	104	32	1	33
Total ...	1,370	219	44	1,633	455	26	481
Rae Bareli ...	452	102	...	554	66	48	114
Sultanpur ...	599	64	37	700	78	25	103
Partabgarh ...	377	67	2	446	229	246	475
Total ...	1,428	233	39	1,700	373	319	692
Total, Oudh ...	5,102	1,619	153	6,874	1,471	652	2,123
Total, N.-W. P. and Oudh,	42,588	9,631	723	52,942	37,887	6,631	44 518

APPENDIX 3.

Memorandum showing total expenditure and receipts of the Department of Agriculture and Commerce, North-Western Provinces and Oudh, during the year 1885-86.

Heads of charges.	Budgetted expenditure.	Actual expenditure.	Saving on budgetted expenditure.	Receipts paid into treasury.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Office establishment	25,086 0 0	24,717 12 5	368 3 7	...
Office contingencies	12,443 3 0	11,233 4 8	1,209 14 4	...
Office travelling allowance	5,500 0 0	4,042 5 8	1,457 10 4	...
Oudh office establishment	2,460 0 0	2,448 10 10	11 5 2	...
Ghazipur Tobacco Farm	4,700 0 0	4,019 8 8	680 7 4	6,500 0 0
Reh and glass experiment contingencies ...	2,624 0 0	1,421 12 4	1,202 3 8	...
Ditto ditto establishment ...	2,376 0 0	2,088 11 11	287 4 1	...
Traffic registration	12,000 0 0	10,800 14 4	1,199 1 8	...
Cawnpore experimental farm contingencies,	8,154 0 0	8,139 7 6	14 8 6	2,283 14 3
Ditto ditto establishment,	5,046 0 0	3 823 0 1	1,222 15 11	...
Ditto ditto workshop ...	7,000 0 0	5,807 6 7	1,192 9 5	2,775 12 9
North Indian manufactures ...	5,000 0 0	...	5,000 0 0	1,829 13 7
Tea shop charges	5,000 0 0	774 6 6	4,225 9 6	636 0 2
Bull fund imprest	1,275 0 0	500 0 0	775 0 0	...
Seed imprest	2,000 0 0	2,170 7 3	Excess 170 7 3	1,023 11 5
Well fund	2 500 0 0	1,960 15 6	539 0 6	...
Usar	8,920 0 0	3,416 11 3	5,503 4 9	...
Total ...	1,12,084 3 0	87,365 7 6	24,718 11 6	14,999 4 2

Certified that the receipts in this office were checked in the manner prescribed in G. O. Circular No. 34, dated 5th October, 1882.

D. M. SMEATON,
Director.